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A Study of the Relationship between Organizational Culture and Organizational Effectiveness of the Electronic Industries in Taiwan

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Abstract

Organizational culture has been shown to influence organizational effectiveness. This study defined the eight dimensions of organizational culture as: (1) tolerant/ staff-oriented; (2) achievement-oriented; (3) innovative; (4) analytical; (5) social relationships; (6) rewarding staff; (7) stable work environment; (8) demanding. These eight dimensions of organizational culture showed generally sufficient characteristic. This study also suggested three dimensions of organizational effectiveness: (1) structural flexibility/ control; (2) focus internal/ external; (3) strategy means/ ends. These three dimensions of organizational effectiveness presented the mainly ample characteristic. This study adopted the listed, over the counter (OTC) and emerging electronic companies only operating in Taiwan as the research objects. Consequently, 144 effective responses (21.18%) were collected. Then, this study tested the fit of this framework by LISREL (Linear Structure Relation) and found that the eight dimensions of organizational culture had a positive influence on organizational culture; the organizational culture positively influenced organizational effectiveness; the three dimensions of organizational effectiveness had a positive influence on organizational effectiveness. Surveys were contributed in the research objects. It found different impacts in each culture by DEA (Data Envelopment Analysis). Finally, to find a more objective relationship between organizational culture and organizational effectiveness, this study adopted a multi-organizational culture and multi-organizational effectiveness variables to do a pairwise comparison. This study understood the different and optimal influence among the variables in organizational culture and organizational effectiveness. It was supported by finding from the current literature. The implications for practice and for future research are also discussed.

Keywords: Organizational culture; Organizational effectiveness; Organizational culture category; Data Envelopment Analysis; Electronic industries

Introduction

While organizational culture has attracted a great deal of attention from scholars (Goodman, Zammuto and Gifford, 2001), the major attention has been focused on the

defining organizational culture (Duncan, 1989) and organizational effectiveness (Parasuraman and Deshpande, 1986). Measuring organizational effectiveness is a very important step in the development process of each organizational culture (Handa and Adas, 1996). The importance of forming and designing effectively organizations was discussed by Hitt (1988). Therefore, it has become necessary to pay attention to organizational culture along with organizational effectiveness (Jung, 2003).

This study took a challenge approach by examining the relationship between organizational culture and effectiveness. First, one of the most difficult challenges for the field of organizational culture and organizational effectiveness is the application of theories and models developed to understand phenomena in each organizational culture category.

Second, this study took tolerant/staff-oriented, achievement-oriented, innovative, analytical, social relationships, rewarding staff, stable work environment and demanding as organizational culture factors (Bennis, 1969; Wallach, 1983; Schine, 1985; Mirvis, 1988; Quinn, 1988; Kopelman, Brief and Guzzo, 1990; Quinn and Spreitzer, 1991; ; Zammuto and Krakower, 1991; Hatton, Rivers, Mason et al., 1999; Hergüner and Reeves, 2000; Pun, 2001; Goodman, Zammuto and Gifford, 2001; Denison, 2004), and adopted structural flexibility/ control, focus internal/ external and strategy means/ ends as organizational effectiveness factors (Cameron and Whetten, 1983; Quinn and Rohrbaugh, 1983; Thibodeaus and Favilla, 1995; Handna and Adas, 1996; Boerman and Bechger, 1997; Denison, Haaland and Goelzer, 2004).

Third, this study also indicated the goodness of fit in organizational culture and organizational effectiveness by LISREL (Linear Structure Relation) model (Joreskog and Sorbom, 1996). And, it can be discussed the relationship between organizational culture and organizational effectiveness from the structural model.

Forth, this study proceeded with DEA (Data Envelopment Analysis) (Friedman and Sinuany-Stern, 1998) and AHP (Analytical Hierarchical Process)/DEA (Sinuany-Stern, Mehrez and Hadad, 2000.) as an analysis method. By these conceptual build, it adopted a challenge approach by exploring the link between organizational culture and organizational effectiveness. It compared the results in which organizational culture influenced organizational effectiveness in different organizational culture category.

Fifth, this study discussed the different phenomenon by combining DEA with AHP, and it researched the optimal relationship between organizational culture and organizational effectiveness. Finally, the discussion at the end of this study summarized the finding, implications and research limitation in organizational culture and organizational effectiveness.

Literature Review

1. Organizational Culture

Numerous researchers have defined organizational culture. It can be an asset or a liability. Understanding culture means understanding the difference between the formal and the informal rules, the way of doing things and the real way espoused (Wallach, 1983).

Bennis (1969) already suggested the being team-oriented, trust and development friends at work factors included in the organizational culture value. In modern times, In the individuals and organizations on the cultural match, Schine (1985) and Wallach (1983) provided the organizational culture index including the risk, relationships-oriented, result-oriented, creative, sociable, stimulating, regulated, personal freedom, equitable, safe, challenging, enterprising, established, cautious, trusting etc as the useful model of organizational culture. Quinn (1988) also provided that it should emphasis on the organizational culture value of the being people-oriented, being team-oriented factors. Then, Kopelman, Brief and Guzzo (1990) demonstrated that culture influenced organizational being team-oriented, trust, an emphasis on quality, achievement orientation and a willingness to experiment factors. Therefore, traditional organization suggests that an emphasis on culture is a key for the being team-oriented, trust, an emphasis on quality and autonomy variables (Mirvis, 1988). So, Quinn and Spreitzer (1991) found that organizations with stringer group culture scores significantly higher than the hierarchical culture in term. Moreover, Zammuto and Krakower (1991) showed that the negatively related to trust, being precise, good performance and positively related to conflict.

Presently, the staff rates real organizational cultures to be relatively high in achievement orientation and fostering social relationships, to be high in rewarding staff, being tolerant/staff-oriented and fostering social relationships, and relatively low in managing conflict and providing rewards, and low in demands for staff (Hatton, Rivers, Mason and Emerson, 1999). When Herguner and Reeves (2000) explored the going against the national culture grain, they found that the fairness, being team-oriented, taking initiative, being result oriented, achievement orientation, flexibility, action orientation, being rule-oriented, working in collaboration with others, being aggressive factors influenced the organizational culture change. Goodman, Zammuto and Gifford (2001) presented the group culture values in which being team-oriented, enthusiasm for the job, taking individual responsibility, being highly organized, an emphasis on quality variables were emphasized. Denison (2004) considered that most of the organizations have to change toward the organization of the participation, broader decision making, building teamwork, faster decision making and more idea factors. Last, Forsythe (2005) mentioned the collaboration was a factor to change an organizational culture.

In the context, we can understand that a great deal of scholars discuss the organizational culture. It can exhibit the important factors of organizational culture. In accordance with the literatures presented above, this study took the tolerant/staff-oriented, achievement-oriented, innovative, analytical, social relationships, rewarding staff, stable work environment, demanding and conflict management factors as organizational culture variables (Bennis,

1969; Wallach, 1983; Schine, 1985; Mirvis, 1988; Quinn, 1988; Brief and Guzzo, 1990; Quinn and Spreitzer, 1991; Zammuto and Krakower, 1991; Hatton, Rivers, Mason et al., 1999; Hergüner and Reeves, 2000; Kopelman, Goodman, Zammuto and Gifford, 2001; Pun, 2001; Denison, 2004; Forsythe, 2005).

2. Organizational Effectiveness

Several models have emerged for the study of organizational effectiveness, each of which has a unique emphasis. The effectiveness of organizations in achieving goals at the organizational level is called organizational effectiveness (Cameron and Whetten, 1983; Quinn and Rohrbaugh, 1983). The organizational effectiveness is also defined as the extent to which an organization fulfills the objectives (Thibodeaus and Favilla, 1995). The topic of organizational effectiveness emphasized process control, information management and goal setting (Quinn, 1998; Desion, Haaland and Goelzer, 2004). Handna and Adas (1996) identified fourteen organizational effectiveness variables into the four general categories for analyzing the organizational characteristics. When Boerman and Bechger (1997) researched the decentralized decision making and organizational effectiveness, they adopted the growth of the organization, interaction with the field, evaluation by external actors, stability, control, the use of management information systems, commitment and educational planning items of organizational effectiveness. The four cultural traits of organizational effectiveness in the Denison model also includes the integration, coordination and goal setting importance (Denison, Haaland and Goelzer, 2004).

The measurement of organizational effectiveness is a very important step in the development of an organization (Handa and Adas, 1996). Its importance in designing and establishing an effective organization has been discussed by scholars. In accordance with the theses discussed above, we took the structural flexibility/control, focus internal/external and strategy means/ends factors as organizational effectiveness variables (Cameron and Whetten, 1983; Quinn and Rohrbaugh, 1983; Thibodeaus and Favilla, 1995; Handna and Adas, 1996; Boerman and Bechger, 1997; Denison, Haaland and Goelzer, 2004).

3. Organizational Culture and Organizational Effectiveness

Steers (1975) and Zammuto (1982) described the measurement of effectiveness was the most issue in the organizational culture theory. For linking organizational culture, Ouchi (1980) identified the characteristics to determine the organizational effectiveness. Quinn and Rohrbaugh (1983) examined that relationship organizational culture and effectiveness by utilizing the competing value framework. Denison and colleagues (1995) and Denison, Haaland and Goelzer (2004) illustrated the different organizational cultures were involved with the different organizational effectiveness. Kotter and Heskett (1992) studied the relationship between strength of culture and organizational effectiveness. Ostroff and

Schmitt (1993) found that the organizational effectiveness was influenced by the organizational culture. Juechter, Fisher and Alford (1998) completed the research found that the organizational culture heavily influenced the organizational effectiveness of business. According to Smith, Arnold, and Bizzell (1988), the ultimate purpose of strategic management is to help organizations increase performance through improved effectiveness, efficiency, and flexibility. Thibodeaux and Favilla (1995) utilized the planning and goal setting, flexibility and adaptation, information management, communication, readiness, evaluations by external entity and stability concepts of organizational effectiveness to research the strategic management process. In the model of organizational effectiveness for consultation management (Ridley and Mendoza, 1993), it included the rules and regulations, sensitivity, contributing to the environment, transformation and planning variables. The process control, information management and goal setting importance are emphasized on the organizational effectiveness (Quinn, 1988).

In these contexts, the relationship between organizational culture and organizational effectiveness becomes important. In accordance with the studies presented above, the organizational culture has a positive influence on organizational effectiveness.

Methodology

The questionnaire consisted of three parts including the organizational culture, organizational effectiveness, and the organizational culture category. This research was conducted from the perspective of employees, and both the organizational culture questionnaire and organizational effectiveness questionnaire were sent to all firms. To cover the phenomenon in the each organizational culture, this study adopted a questionnaire about the organizational culture index (Wang and Shyu, 2003; Quinn, 1988), and all items were measured on a five-point Likert scale of 1 to 5, from “strongly agree” to “strongly disagree”. Since Taiwan’s electronic industry faces global competition, it can give a good sample. For the purposes of this study, we focused on the electronic industries within four different categories. This study assumed the $\alpha = 0.05$, $e = 0.06$ and expected that the effective response (20%) was collected. This research had provided the 680 questionnaires with the listed, OTC and emerging electronic companies in Taiwan and then got the 144 questionnaires retrieved. The response rate was about 21.18%. This data was analyzed for getting the research purposes.

First, we proceeded with the reliability and validity analysis of the organizational culture, organizational effectiveness and culture category. Second, we proceeded the LISREL (Linear Structure Relation) analysis to fit the structure model of the organizational culture and effectiveness well. Third, this study analyzed the efficiency by the DEA method in the four culture categories. It explored how the different organizational culture could influence the organizational effectiveness in the different culture category. Finally, it showed which

organizational culture factors could influence the organizational effectiveness factors to achieve the greatest efficiency in the different culture category by AHP/DEA methodology.

Result

1. Reliability and Validity Test

1.1 The reliability and validity of the organizational culture

This questionnaire of organizational culture was made up by as forty-three items. The items were adopted from the literature review described. According to the factor analysis, there were the eight factors in the organizational culture (Table 1). Cuieford (1965) suggested that *Cronbach's* α greater than 0.7 is high reliability while less than 0.35 is low reliability, which should be rejected. So, the reliability including tolerant/ staff-oriented, achievement-oriented, innovative, analytical, social relationships, rewarding staff, stable work environment and demanding factors achieved the higher reliability (*Cronbach's* $\alpha \geq 0.7$).

Moreover, according to Kerlinger (1999), measures with item to total correlations larger than 0.6 are believed to have high criterion validity (Table 1). The item-to-total correlations of all our measures are greater parts than 0.5, we conclude that the criterion validity of each scale in this study was satisfactory. Furthermore, discriminant validity was examined by counting the number of times an item correlates higher with items of other variables than with items of its own variable (Aladwani and Palvia, 2002). Jointly, these factors present both convergent and discriminated validity in this study.

1.2 The reliability and validity of the organizational effectiveness

This questionnaire of organizational effectiveness was developed as twenty-two items. These items were adopted from the literature reviews and it was sorted to the three factors using the factor analysis (Table 2). The reliability including structural flexibility/ control, focus internal/ external and strategy means/ ends factors achieved the higher reliability (*Cronbach's* $\alpha \geq 0.7$) (Cuieford, 1965). And, the item to total correlations of all items are greater parts than 0.5, we conclude that the criterion validity of each scale in this study was satisfactory (Table 2) (Aladwani and Palvia, 2002).

1.3 The reliability and validity of the culture category

This study was developed the organizational category index based on the competing value framework (Quinn, 1988; Wangand Shyu, 2003). We separated the organizational culture category from four parts. From the factor analysis, this questionnaire was separated into development culture; common culture, stratum culture and rational culture. According to the reliability analysis, the reliability was fine between 0.7 with 0.9. But, the coefficient of item 20 was relatively low in common culture. When the item 20 was deleted, the coefficient of

Cronbach's α would increase. We must analyze the reliability of each culture category and confirmed the organizational culture index used well. These indicated a high degree of four culture categories (*Cronbach's* $\alpha \geq 0.7$) (Cuieford, 1965). The item to total correlations of all items are greater parts than 0.5, we determined that the criterion validity of each variable in this study was satisfactory (Table 3) (Aladwani and Palvia, 2002).

2. Analysis of the structural model

Although the present *Cronbach's* α and item-to-total correlations have shown the sufficient reliability and validity of each conception, the independence among the factors of each construct still required examination and verification. So, evidence factor analysis was implemented (Byrne, 1998), to assess the measurement models of organizational culture and effectiveness. To establish the scale for each latent variable in the model, the first regression path in each measurement model was fixed at 1 (Maruyama, 1998). The results of confirmatory factor analysis for all dimensions were shown in Table 4, which reveal that all parameter estimates of the factors for each dimension were rather large and statistically significant, with t-values greater than 1.96 and factor loading values greater than 0.5. Hence, the models fit the sample data well for all dimensions (Table 4).

This study used the LISREL (Linear Structure Relation) method to test that the structure of the organizational culture and organizational effectiveness is well. From the model text, we can know that RMR (root mean square residual) value was 0.019 (<0.05 , Joreskog and Sorbom, 1996), the GFI (goodness of fit index) value was 0.943 (>0.9 , Joreskog and Sorbom, 1996) and the AGFI (adjusted goodness-of-fit index) was 0.908 (>0.9 , Joreskog and Sorbom, 1996). All values reached the standardization (Table 5). And the LISREL mode was shown in Figure 1. It was found that 1) the tolerant/staff-oriented, achievement-oriented, innovative, analytical, social relationship, rewarding staff, stable work environment and demanding dimensions toward organizational culture, 2) the structural flexibility/ control, focus internal/ external and strategy means/ends toward organizational effectiveness, 3) the organizational culture toward organizational effectiveness achieved the statistically significance.

3. Organizational culture influence organizational effectiveness in each culture category-DEA

To analyze the organizational culture with which the organizational effectiveness influence the organizational effectiveness in each culture category, the results obtained by DEA could achieve this object. Table 6 showed that the stable work environment factor (28.11%) in organizational culture significantly influenced the structural flexibility/control and strategy means/ ends factors (42% and 40.15%) on development culture. Table 7 displayed that the social relationships factor (33.84%) significantly influenced the strategy

means/ends factor (80%) on common culture. It showed that the tolerant/ staff-oriented, social relationships and stable work environment factors (19.25%, 23.74% and 19.24%) significantly influenced the focus internal/ external and strategy means/ ends factors (40.07% and 48.77%) on stratum culture in table 8. It showed that the tolerant/ staff-oriented, innovative and stable work environment factors (18.91%, 19.34% and 18.58%) influenced the structural flexibility/ control and focus internal/ external factors (49.15% and 30.70%) on rational culture in table 9. From these results, it provide the information which the different organizational culture influenced the different organizational effectiveness in each organizational culture category.

4. Pairwise comparison with the organizational culture and organizational effectiveness in each category-AHP/DEA

Although DEA was originally designed for dichotomic classification, such comparisons and validation were important (Friedman and Sinuany-Stern, 1998). For clearly understanding and comparing the results, this study was an attempt to illustrate and integrate well-know and used methods, DEA and AHP. It showed that the innovative factor (54.78%) in organizational culture highly influenced the strategy means/ends factor (75.94%) in organizational effectiveness on development culture in Table 10. Table 11 clearly displayed that the demanding factor (77.54%) in organizational culture highest influenced the strategy means/ ends factor (100%) in organizational effectiveness on common culture. It showed that the demanding factor (57.19%) in organizational culture significantly influenced the strategy means/ ends factor (74.57%) in organizational effectiveness on stratum culture in Table 12. Table 13 showed that the innovative factor (45.94%) in organizational culture highly influenced the strategy means/ ends factor (73.66%) in organizational effectiveness on rational culture. Though the demanding factor in organizational culture significantly affected the strategy means/ends factor in organizational effectiveness, it presented the different importance in each organizational culture category.

5. Conclusion

This study focused on the organizational culture and organizational effectiveness in each organizational culture category and took the electronic companies in the listed, listing and emerging electronic industries as the research objects. The factor analysis of the organizational culture measure produced eight dimensions of the organizational culture: (1) tolerant/ staff-oriented; (2) achievement-oriented; (3) innovative; (4) analytical; (5) social relationships; (6) rewarding staff; (7) stable work environment; (8) demanding. These eight dimensions of organizational culture showed the adequate industry characteristic. The conflict management factor in organizational culture (Zammuto and Krakomer, 1991; Hatton, Rivers and Mason et al., 1999) had no significant in electronic industry because the conflict

management did not consider the significant differences of each organizational culture (Jung, 2003). According to the factor analysis of organizational effectiveness, twenty-two variables were identified to predict the effectiveness of the electronic companies. The fourteen variables were significant in predicting the effectiveness (Handa and Adas, 1996). This study also showed that the sensitivity, contributing to the environment and transformation (Ridley and Mendoza, 1993), information management (Thibodeaux and Favilla, 1995; Boerman and Bechger, 1997; Quinn, 1988), communication and readiness (Thibodeaux and Favilla, 1995) and evaluation and stability (Thibodeaux and Favilla, 1995; Boerman and Bechger, 1997) had also the significance in electronic industry.

This study also investigated the independent variables on organizational culture and dependent variables on organizational effectiveness from the path diagram of LISREL model (Figure 1). It showed that the tolerant/ staff-oriented, achievement-oriented, innovative, analytical, social relationships, rewarding staff, stable work environment and demanding factors of organizational culture had a positive impact on the flexibility/ control, focus internal/ external and strategy means/ ends factors of organizational effectiveness ($p \leq 0.001$) (Quchi, 1980; Dension, 1995; Dension, Haaland and Goelzer, 2004; Kotter and Heskett, 1992; Ostrff and Schmitt, 1993; Fisher and Alford, 1998). And the relationship between organizational culture and effectiveness was measured by the structural model in electronic industry.

For presenting the different result in each organizational culture, this study adopted the organizational culture index to divide into development, common, stratum and rational cultures. The variables concerned with the long seniority employees had no significant in electronic industry (Wang and Shyu, 2003).

Last, for measuring the efficiency that organizational culture affects organizational effectiveness in each organizational category, this paper adopted DEA (Table 6 to 9) and AHP/DEA (Table 10-13) methods to appear the different result (Sinuany-Stern, Mehrez and Hadad, 2000). The stable work environment factor of organizational culture had higher influence on the structural flexibility/ control and strategy means/ ends factors of organizational effectiveness on development culture (Table 6). The social relationships factor of organizational culture had higher significance on strategy means/ ends factor of organizational effectiveness on common culture (Table 7). The tolerant/ staff-oriented, social relationships and stable work environment factors of organizational culture highly influenced on the focus internal/ external factor of organizational effectiveness on stratum culture (Table 8). The tolerant/ staff-oriented, innovative and stable work environment factors presented the higher significance on the structural flexibility/ control and focus internal/ external factors of organizational effectiveness on rational culture. But, this study found the significance of each organization culture was more uniform. Hence, it adopted AHP/DEA method and also found that the importance of each organizational culture was clearer from the result of AHP/DEA. It

showed out which one organizational culture positively affected the organizational effectiveness.

Therefore, this study presented the efficiency which the organizational culture powerfully influenced the organizational effectiveness was built clearly in the organizational cultures in the electronic industry in Taiwan. It also calculated and developed fitness model as a practice tool by the DEA and AHP/DEA methodologies. Though the pairwise comparison, it showed the bigger gap of these variables of organizational culture and effectiveness. And, no matter what each culture, the demanding factor of organizational culture has most influence on the strategy means/ ends factor of organizational effectiveness on the four cultures (Table 10-13). The different importance among the variables in organizational culture and effectiveness was clear in the comparison.

Though the present empirical results largely support the current model, this study still has several limitations. First, since the empirical data were provided by individual informants, the existence of possible biases cannot be discounted. Second, the current data were collected in Taiwan, and the distribution of the scale of the firms surveyed may be quite different from that in other countries. Thus, it should not be assumed that the present results represent the wider case. However, it may be a useful reference for the firms located in other countries whose circumstances are similar to those in Taiwan.

References

1. Aldawani, A.M. and Palvai, P.C. (2002), Developing and Validating an instrument for measuring user-perceived web quality, *Information and Management*, 39 (6), 467-476.
2. Bennis, W. G. (1969). *Organization Development: Its nature, origins, and prospects*. Reading, MA: Addison Wesley Publishing, Inc.
3. Byrne, B. M. (1998), *Structural Equation Modeling with LISREL, PRELIS, and SIMPLIS: Basic Concepts, Application, and Programming*, Lawrence Erlbaum, NJ: Mahwah.
4. Boerman, P. L. J. and Bechger, T. M. (1997). Decentralized Decision Making and Organizational Effectiveness in Colleges for Vocational Education: A Structural Equation Model for School Organization, *Educational Research and Evaluation*, 3 (3), 189-213.
5. Cameron, K.S. and Whetton, D.A. (1983). *Organizational Effectiveness*. New York: Academic Press.
6. Denison D. R. and Mishra, A. K. (1995). Toward a theory of organizational culture and effectiveness, *Organization Science*, 6(2), 204-223.
7. Denison, D. R., Haaland, S. and Goelzer, P. (2004). Corporate Culture and Organizational Effectiveness: Is Asia Different From the Rest of the World?, *Organizational Dynamics*, 33 (1), 98-109.

8. Duncan, W. J. (1989). Organizational culture: Getting a fix on an elusive concept, *The Academy of Management Executive*, 3 (3), 229-236.
9. Friedman, L. and Sinuany-Stern, Z. (1998). Combining ranking scales and selecting variables in the DEA context; the case of industrial branches. *Computer Operation Research*, 25(9), 781-791.
10. Frost, S. H. and Gillespie, T. W. (1998). Organizations, culture, and teams: links toward genuine change, *New Directions for Institution Research*, 100 (winter), 5-15.
11. Forsythe, L. L. (2005). Using an organizational culture analysis to design interventions for change, *Association of Operating Room Nurses Journal*, 81(6), 1290-1308.
12. Goodman, E. A., Zammuto, R. F. and Gifford, B. D. (2001). The competing value framework: understanding the impact of organizational culture on the quality of work life, *Organization Development Journal*, 19 (3), 58-68.
13. Handa, V. and Adas, A. (1996). Predicting the level of organizational effectiveness: a methodology for the construction firm, *Construction Management and Economics*, 14, 341-352.
14. Hatton, C., Rivers, M., Mason, H., Mason, L., Emerson, E., Kiernan, C., Reeves, DandAlborz, A. (1999). Organizational culture and staff outcomes in services for people with intellectual disabilities, *Journal of Intellectual Disability Research*, 43 (3), 206-218.
15. Hergüner, G. and Reeves, N. B. R. (2000). Going against the national cultural grain: a longitudinal case study of organizational culture change in Turkish higher education, *Total Quality Management*, 11 (1), 45-56.
16. Hitt, A.M. (1988). The measuring of organizational effectiveness: multiple domains and constituencies, *Management in Review (MIR)*, 28, 28-39.
17. Joreskog, K. G., and Sorbom, D., (1996). LISREL 8: User's reference guide (1sted). Chicago: Scientific Software.
18. Jung, S. (2003). The effect of organizational culture on conflict resolution in marketing, *Journal of American of Business*, 3 (Stp), 242-246.
19. Kerlinger, F.N. (1999), "*Foundations of Behavior Research*", Fourth Edition, A Harcourt College Publishing, TX.
20. Kopelman, R. E., Brief, A. P., and Guzzo, R. A. (1990). *The Role of Culture and Climate in Productivity*. In B. Schneider (Ed.), *Organizational Climate and Culture*, Jossey-Bass: San Francisco.
21. Kotter, J.P. and Heskett, A. (1992). *Corporate culture and performance*. New York: Free Press.
22. Maruyama, G.M. (1998), *Basics of Structural Equation Modeling*, Sage, CA: Thousand Oaks.

23. Mirvis, P. H. (1988). *Organization Development: Part I-An Evolutionary Perspective*. In W. A. Passmore and R. W. Woodmen (Eds.) *Research in organization change and development*, 2, 1-57, Greenwich, CT: JAI Press
24. Ostroff, C. and Schmitt, N. (1993). Configurations of organizational effectiveness and efficiency, *Academy of Management Journal*, 36(6), 1345-1361.
25. Ouchi, W. G. (1980). Markets, Bureaucracies, and Clans, *Administrative Science Quarterly*, 25, 129-141.
26. Pun, K. F. (2001). Culture influences on total quality management adoption in Chinese enterprises: an empirical study, *Total Quality Management*, 12 (3), 323-342.
27. Quinn, R. E. and Spreitzer, G.M. (1991). The psychometrics of the competing values culture instrument and an analysis of the impact of organizational culture on quality of life. In R.W. Woodman and W. A. Passmore (Eds.), *Research in Organization Change and Development*, 5, 115-142. Greenwich, CT: JAI Press.
28. Quinn, R. E. (1988). *Beyond Rational Management: Mastering the Paradoxes and Competing Demands of High Performance*, San Francisco: Jossey-Bass.
29. Quinn, R.E. and Rohrbaugh, J. (1983). A spatial model of effectiveness: criteria towards a competing values approach to organizational analysis, *Journal of Management Science*, 29, 363-377.
30. Parasuraman, A and Deshpande, R (1986). Linking corporate culture to strategic planning, *Business Horizons*, 29 (3), 28-37.
31. Ridley, C. R. and Mendoza, D. W. (1993). Putting Organizational Effectiveness into Practice: the Preeminent Consultation Task, *Journal of Counseling and Development*, 72, 168-173.
32. Schein, E. H. (1985). *Organizational culture and leadership*, San Francisco, CA: Jossey-Bass.
33. Sinuany-Stern, Z., Mehrez, A. and Hadad, Y. (2000). An AHP/DEA methodology for ranking decision making units. *International Transactions in Operational Research*, 7, 109-124.
34. Smith, G. D., Arnold, R.J. and Bizell, B. G. (1988). *Business strategy and policy*. Boston: Houghton Mifflin Co.
35. Steers, R.N. (1975). Problems in the measurement of organizational effectiveness, *Administrative Science*, 20, 546-558.
36. Thibodeaux, M. S., Favilla, E. (1995). Strategic management and organizational effectiveness in colleges of business, *Journal of Education for Business*, 70 (4), 189-196.
37. Wallach, E. J. (1983). Individuals and organizations: the culture match, *Training and Development Journal*, 2, 29-36.

38. Wang, D. S. and Shyu, C.L. (2003). The impact of organizational culture and knowledge sharing motivation on knowledge sharing, *Sun Yat-Sen Management Review*, 11(3), 409-431.
39. Zammuto, R.F. and Krakower, J.Y. (1991). Quantitative and qualitative studies of organisational culture, *Research in Organizational Change and Development, An Annual Series Featuring Advances in Theory, Methodology, and Research*, 5, pp. 83-114.
40. Zammuto, R.F. (1982) *Assessing Organizational Effectiveness*, Albany, New York: State University of New York Press.

Table 1: Result of Reliability and Validity Test on Organizational Culture

Dimension	Factor	Item-to-total correlations	Cronbach α
Organizational Culture	Tolerant/ staff-oriented	0.527669	0.8620
	Achievement-oriented	0.638213	0.8769
	Innovative	0.449457	0.8092
	Analytical	0.57712	0.7932
	Social relationships	0.557967	0.7363
	Rewarding staff	0.7385	0.8496
	Stable work environment	0.5925	0.7621
	Demanding	0.5892	0.7415

Table 2: Result of Reliability and Validity Test on Organizational Effectiveness

Dimension	Factor	Item-to-total correlations	Cronbach α
Organizational Effectiveness	Structural flexibility/ control	0.62382	0.8884
	Focus internal/ external	0.660378	0.8962
	Strategy means/ ends	0.7151	0.8480

Table 3: Result of Reliability and Validity Test on Organizational Culture Category

Dimension	Factor	Item-to-total correlations	Cronbach α
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Culture Category	Development culture	0.699275	0.9054
	Common culture	0.712538	0.9106
	Stratum culture	0.516333	0.7022
	Rational culture	0.5641	0.7775

Table 4: The result of confirmatory factor analysis

Dimension	Factor	Standardized Parameter Estimates
Organizational culture	Tolerant/ staff-oriented	0.89
	Achievement-oriented	0.72
	Innovative	0.60
	Analytical	0.59
	Social relationships	0.65
	Rewarding staff	0.54
	Stable work environment	0.66
	Demanding	0.72
Organizational effectiveness	Structural flexibility/ control	0.88
	Focus internal/ external	0.97
	Strategy means/ends	0.85

Table 5: Model Fit statistics of LISREL

Index	Value	Ideal Value
RMR	0.019	<0.05
GFI	0.943	>0.9
AGFI	0.908	>0.9

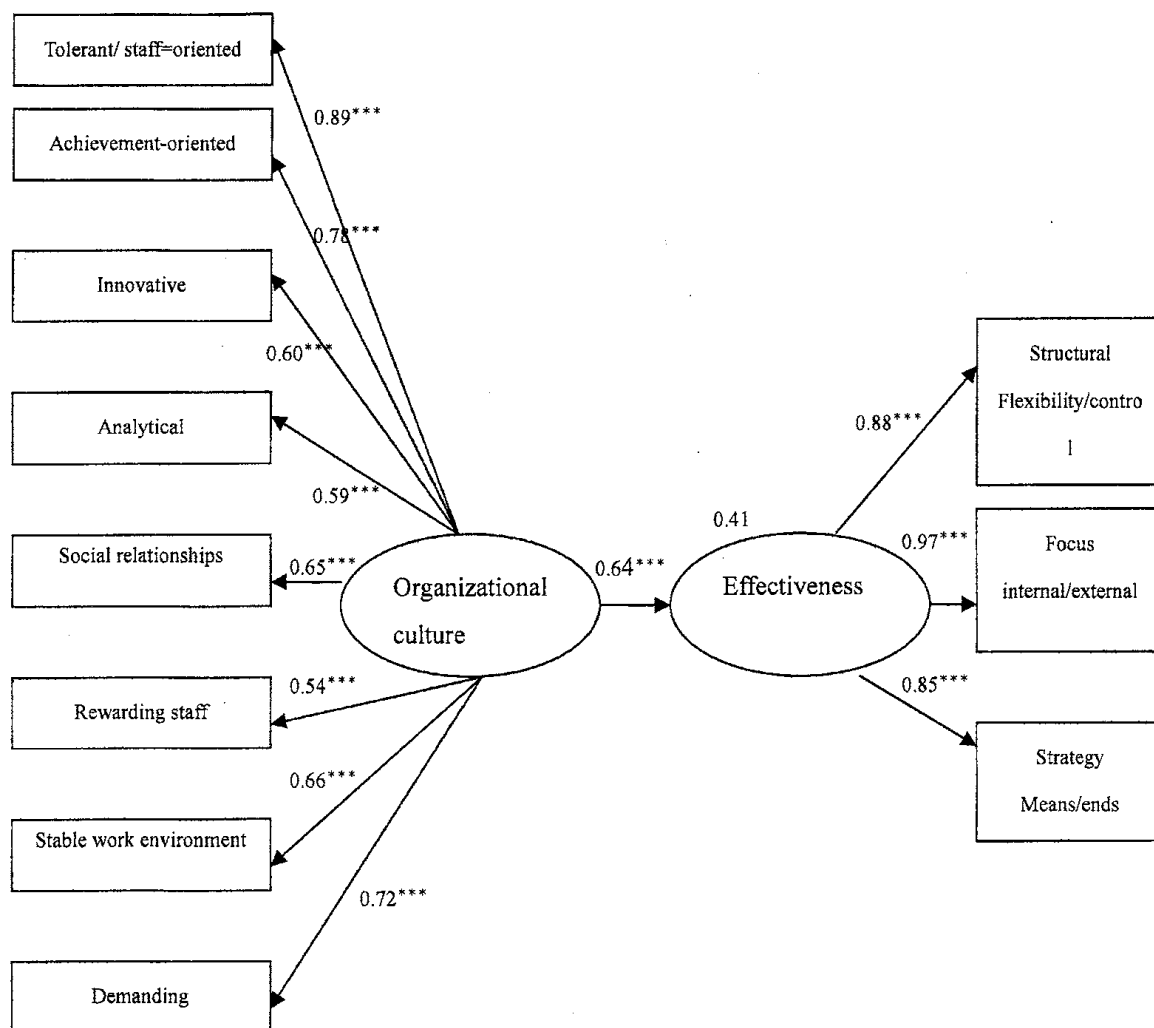


Figure1: Path diagram of the LISREL model of organizational culture and organizational effectiveness

Note: *** represents $p < 0.001$

Table 6: Significance on Development Culture

Development Culture	Organizational Culture								Organizational Effectiveness		
%	tolerant/ staff-oriented	achievement-oriented	innovative	analytical	social relationships	rewarding staff	stable work environment	demanding	structural flexibility/control	focus internal/external	strategy means/ends
Significance	13.14	8.62	12.28	7.69	11.00	0	28.11	19.17	42.00	17.86	40.15

Table 7: Significance on Common Culture

Development Culture	Organizational Culture								Organizational Effectiveness		
%	tolerant/ staff-oriented	achievement-oriented	innovative	analytical	social relationships	rewarding staff	stable work environment	demanding	structural flexibility/control	focus internal/external	strategy means/ends
Significance	6.16	20	0	20	33.84	0	0	20	20	0	80

Table 8: Significance on Stratum Culture

Development Culture	Organizational Culture								Organizational Effectiveness		
%	tolerant/ staff-oriented	achievement-oriented	innovative	analytical	social relationships	rewarding staff	stable work environment	demanding	structural flexibility/control	focus internal/external	strategy means/ends
Significance	19.25	0	4.33	13.48	23.74	5.57	19.24	14.38	11.16	40.07	48.77

Table 9: Significance on Rational Culture

Development Culture	Organizational Culture								Organizational Effectiveness		
%	tolerant/ staff-oriented	achievement-oriented	innovative	analytical	social relationships	rewarding staff	stable work environment	demanding	structural flexibility/control	focus internal/external	strategy means/ends
Significance	18.91	10.9961	19.34	4.60	8.05	4.32	18.58	15.21	49.15	30.70	20.16

Table 10: Significance on Development Culture

	Organizational Culture								Organizational Effectiveness		
%	tolerant/ staff-oriented	achievement-oriented	innovative	analytical	social relationships	rewarding staff	stable work environment	demanding	structural flexibility/control	focus internal/external	strategy means/ends
Development Culture	5.59	5.50	5.82	3.66	3.76	5.13	15.76	54.78	14.16	9.90	75.94

Table 11: Significance on Common Culture

	Organizational Culture								Organizational Effectiveness		
%	tolerant/ staff-oriented	achievement-oriented	innovative	analytical	social relationships	rewarding staff	stable work environment	demanding	structural flexibility/control	focus internal/external	strategy means/ends
Development Culture	4.65	0	0	11.31	0	6.50	0	77.54	0	0	100

Table 12: Significance on Stratum Culture

	Organizational Culture								Organizational Effectiveness		
%	tolerant/ staff-ori ented	achieve ment-ori ented	innovati ve	analytic al	social relations hips	rewardi ng staff	stable work environ ment	demandi ng	structur al flexibilit y/control	focus internal/ external	strategy means/e nds
Developm ent Culture	9.18	4.80	6.36	3.56	7.41	9.42	2.07	57.19	17.04	8.39	74.57

Table 13: Significance on Rational Culture

	Organizational Culture								Organizational Effectiveness		
%	tolerant/ staff-ori ented	achieve ment-ori ented	innovati ve	analytic al	social relations hips	rewardi ng staff	stable work environ ment	demandi ng	structur al flexibilit y/control	focus internal/ external	strategy means/e nds
Developm ent Culture	7.44	6.89	3.07	6.17	11.38	11.99	7.13	45.94	18.14	8.21	73.66